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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/713,305

11/14/2003

Clemens Jung

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WHIRLPOOL PATENTS COMPANY - MD 0750  
500 RENAISSANCE DRIVE - SUITE 102  
ST. JOSEPH, MI 49085

EXAMINER

PATEL, RITA RAMESH

ART UNIT

PAPER NUMBER

1746

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DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/713,305	Applicant(s) JUNG ET AL.	
	Examiner Rita R. Patel	Art Unit 1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 February 2007.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2,8,24-29,31,32,34-39 and 41-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2,8,24-29,31,32,34-39 and 41-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/23/07</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/22/07 has been entered.

### ***Response to Remarks and Amendments***

This Office Action is responsive to the amendment filed on 2/22/07. Claims 2, 8, 24-29, 31-32, 34-39, and 41-44 are pending. Claims 24, 28, and 31 are amended. Claims 30 and 40 have been cancelled. Claims 41-44 have been added. Applicant's arguments have been fully considered and are persuasive thus the 35 USC 103 rejection over Bashark further in view of Smith has been overcome. However, upon further consideration, the instant claims are rejected under new grounds of rejections and thus, claims 2, 8, 24-29, 31-32, 34-39, and 41-44 are rejected for the reasons of record.

In re Applicant's remarks filed on 2/22/07, the remarks are wholly directed towards new claim limitations which will be discussed in their entirety herein.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 8, 24-29, 31-32, 34-39 and 41-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bashark (US Patent No. 3,888,269) in combination with Smith et al. herein referred to as "Smith" (US Patent No. 5,586,567) and Thies (US Patent No. 6,432,216).

Bashark discloses control system for dishwasher. The reference discloses that in Patent No. 3,279,481, a turbidity sensor is used to determine the turbidity of the rinse water. See col. 1, lines 60-67. The reference discloses sensing the turbidity of the dish treating liquid after the pump has been operating for a selecting period of time such as after one minute of the first rinse period. See col. 3, lines 3-20, and lines 49-68, and col. 4, lines 1-7, 36-46.

However, Bashark does not teach determining the degree of soiling of the rinse liquid by determining the turbidity values corresponding to the recirculation of the liquid in the lower and upper spray plane as claimed.

Smith teaches a turbidity sensing mechanism for a dishwasher. The reference also discloses the turbidity is a measure of the suspended and/or soluble soils in the fluid. See col. 3, lines 51-53. The reference discloses recirculation of the liquid in the

lower and upper spray plane. It would have been obvious for one skilled in the art to use the lower and upper spray plane, and turbidity sensing mechanism taught Smith et al. in the Bashark process to obtain the claimed process. This is because both references are from the same technical endeavor, which is using the turbidity sensor to determine the turbidity of the rinse water. This is also because the steps of measuring the turbidity as taught by Bashark will include determining the solubility of the soil as claimed. See Smith et al., col. 3, lines 51-53. This is also because the degree of turbidity depends on the amount of soil been found on the dishes. See Bashark, col. 3, lines 3-20.

Bashark and Smith teach the claimed invention, except fail to specifically state a method for alternately recirculating the rinsing liquid and the determined turbidity values being associated with the respective lower or upper spray plane in operation.

Thies, however teaches a soil sensing system for a dishwasher including an upper and lower spray arm. The reference teaches diverting wash liquid to the upper/lower wash arm assembly using valve 108, with associated measurements collected from pressure sensor 60 which provides a signal to controller 70 indicating the pressure limit within the soil collector 46. The measurement can be timed to occur when the wash liquid is being supplied to each wash arm. It would have been obvious to one of ordinary skill in the art at the time of the invention to alternate the spray patterns in Bashark and Smith to ensure recirculation of washing liquid that is not too dirtied, as taught by Thies. Recirculation of washing liquid minimizes water use and detergent use, is more cost effective, and energy efficient. As taught by Thies, sensing the

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dirtiness of the water and associating it with different spray arms is known in the art. Recirculating really dirty water results in ineffectual cleaning and often requires even more cleaning which in turn increases time, financial burdens, and resources required to clean articles in a washing machine; therefore, sensing the dirtiness of the fluid is a known means taught by Thies to achieve optimal cleaning. Incorporating this feature of Thies to the turbidity sensing washing machine of Bashark-Smith would have an obvious variant in the art of spraying recirculated washing fluid in washing machines that use soil measuring means. See Thies, col. 5, lines 8-12, 19-29 and col. 6, lines 35-40.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rita R. Patel whose telephone number is (571) 272-8701. The examiner can normally be reached on M-F: 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



rrp



**MICHAEL BARR**  
**SUPERVISORY PATENT EXAMINER**